

ORIGINAL CLAIMS

MULTISTANDARD VIDEO DECODER AND DECOMPRESSION SYSTEM FOR
PROCESSING ENCODED BIT STREAMS INCLUDING A STANDARD-
INDEPENDENT STAGE AND METHODS RELATING THERETO

USSN: 09/773,473

Status: Pending

Our Reference: 94100417(EP)USC1X1C1D6 PDDD

Total Claims: 13

1. A multi-standard decoder for decoding a data stream comprising:
processing stages interconnected to form a pipeline and for processing tokens
derived from the data stream, the processing stages including standard-independent
and standard-dependent processing stages, the standard-dependent processing
stages capable of reconfiguration to operate in accordance with different data
encoding standards; and

wherein the tokens provide reconfiguration information to the standard-
dependent processing stages.

2. The multi-standard decoder of claim 1, wherein each of the tokens
includes an extension indicator that indicates whether additional words are present.

3. The multi-standard decoder of claim 1, wherein one of the standard-
dependent processing stages comprises an inverse quantizer.

4. The multi-standard decoder of claim 3, wherein one of the tokens
comprises a first QUANT_TABLE token.

5. The multi-standard decoder of claim 4, wherein the inverse quantizer
recognizes the first QUANT_TABLE token and, responsive to a first state of the
extension indicator in a first word of the first QUANT_TABLE token, generates a
second QUANT_TABLE token to be conveyed to another of the processing stages.

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1 6. The multi-standard decoder of claim 5, wherein the second
2 QUANT_TABLE token includes quantization table values.

1 7. The multi-standard decoder of claim 4, wherein responsive to a second
2 state of the extension indicator of the first word of the QUANT_TABLE token, the
3 inverse quantizer installs a quantization table of the first QUANT_TABLE token in a
4 memory.

1 8. A method of decoding a data stream of data encoded by different
2 standards comprising:
3 receiving tokens at a standard-dependent processor, the standard-dependent
4 processor capable of reconfiguration to operate in accordance with the different
5 standards; and
6 reconfiguring for standard-dependent processing in response to the received
7 tokens.

1 9. The method of claim 8, wherein each token includes an extension
2 indicator that indicates whether additional words are present and has a first and a
3 second state to indicate reconfiguration information.

1 10. The method of claim 8, wherein one of the conveyed tokens is a first
2 QUANT_TABLE token, and further comprising:
3 recognizing the first QUANT_TABLE token; and

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4 responsive to the first state of the extension indicator in a first word of the first
5 QUANT_TABLE token, generating a second QUANT_TABLE token to be conveyed
6 to another processor.

1 11. The method of claim 7, wherein the second QUANT_TABLE token
2 includes quantization table values to be used by the another processor.

1 12. The method of claim 9, further comprising:
2 responsive to a second state of the extension indicator of the first word of the
3 QUANT_TABLE token, installing a quantization table of the first QUANT_TABLE
4 token in memory.

1 13. A system comprising:
2 processing stages including standard-independent and standard-dependent
3 processing stages, the standard-dependent processing stages capable of
4 reconfiguration to operate in accordance with different data encoding standards; and
5 tokens for interacting with the processing stages, the tokens providing
6 reconfiguration information to the standard-dependent processing stages to cause
7 the standard-dependent processing stages to reconfigure.